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ABSTRACT

A multimedia software package, ASTOUND, has been used by the University of South Carolina (USC) Sumter in the development of lectures and support learning materials in a computer literacy course. A hardware setup, known as the Tech Commander, which provides immediate feedback for both students and instructor as work is being done in the lab, has also been implemented in the instructional lab (computer classroom). Background information is provided on USC Sumter and its use of information technology in a computer literacy course. The use of multimedia tools, such as ASTOUND, is summarized, then the perceived benefits and costs associated with their utilization are outlined. A list of demonstrations performed at the conference is provided. (MAS)

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Multimedia in the Classroom-- Rejuvenating the Literacy Course

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Abstract

During the past academic year, I have utilized ASTOUND™ multimedia software in the development of lectures and support learning materials in our computer literacy course. We have also implemented a hardware setup known as the Tech Commander in our instructional lab (computer classroom) which provides immediate feedback for both the students and instructor as work is being done in the lab. I will summarize the use of both of these tools and then outline the perceived benefits and costs associated with their utilization. During the session I will demonstrate the use of ASTOUND™ and many of its most useful teaching/learning tools. I will summarize my experiences, emphasizing those techniques which worked most effectively and those which I would avoid if I were starting over. There should be time for questions, and any interested parties are encouraged to contact me via e-mail or phone.

Background

USC Sumter is a branch campus of the University of South Carolina System with an approximate enrollment of 1,000 students which offers the first two years of liberal arts course work in all disciplines, four years of course work in Education, Business and Interdisciplinary Studies through articulation agreements with other system campuses, and graduate courses through our Graduate Regional Studies Office. The computer literacy course, while not required, is taken by virtually all of our students (unless they already have the background from previous studies/experiences). It is a typical mixture of lecture/discussion/lab work and the custom text book includes a complete text on Computer Concepts, and modules on Windows, WordPerfect for Windows, Quattro Pro for Windows, and Paradox for Windows, as well as home grown modules on the Internet and the library information systems.

Introduction

I have been using some form of computer projection since the late 1980's though it was mainly for demonstration of the software introduced in the Computer Literacy (CL) course. I gradually began to supplement my lecture material with Harvard Graphics to create slide shows, but utilized only linear slides without multimedia activity such as sound, motion video, scanned images, etc. In 1994, I attended the ASCUE Pre-conference Seminar Using COMPEL to Create Multimedia Presentations and learned how to incorporate full multimedia effects in presentations as well as utilize the run-time version to create learning guides and support material for my students. During the seminar I visited Wills Bookstore in Barefoot Landing (a good bookstore right across the street) and found an article

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which reviewed some multimedia packages, including COMPEL, ASTOUND, Freelance Graphics, and PowerPoint. ASTOUND was the most highly rated, and after contacting various vendors, we purchased a ten-pack to install in our multimedia development center (affectionately called the hi-tech room) and computer classrooms. In the Fall of 1994, we adopted a new text book. I have spent the past two semesters refining the support materials for the CL course, and to my surprise, the materials themselves, as helpful as they are, are not the only positive outcomes of my transition to multimedia tools.

Benefits

Some of the benefits include:

1. I have totally rethought the course content as I have been forced to update the materials electronically. I have been reinvigorated as a professor.
2. I have been much more organized in my coverage--being more certain that I cover all the intended material, especially since I teach multiple sections of the CL course.
3. I have been able to increase the amount of material they "take notes on" and thestudents and I both perceive this as a benefit.
4. I have been able to construct support materials directly from the lecture materials and put them "on the network" so students can review any lecture notes at their convenience utilizing ASTOUND Player (the run-time version of ASTOUND) without additional paperwork.
5. I have been able to revise materials "on the fly" as well as immediately following a lecture.
6. I have been able to demonstrate to my computer literacy students first hand how computing can become an integral part of an effective multimedia information delivery system.
7. I have begun to introduce these multimedia techniques to our non-computer faculty through luncheon workshops/demonstrations and their interest level is increasing as they see it in action.
8. The library staff and I are developing library "tour" multimedia presentations which will help free up library personnel resources.
9. We are exploring grant opportunities to enable us to help bring this knowledge to our area K-12 educators.

Software

ASTOUND™ was chosen since it was particularly straightforward in its multimedia "linking" allowing even the raw novice to include motion video, sounds, clip art, animated actors, etc. by simply learning the functions a few icons. I wanted ANY faculty member to feel comfortable utilizing the software to prepare learning materials with as little frustration as possible. I did discover that the review I read on ASTOUND™ which stated that the only challenging aspect was the use of the "time-line" to control the timing of a slide was accurate. I did experience a learning curve but I had the foresight to wait until I felt confident before sharing some of the more subtle aspects of slide control to my peers.

ASTOUND™ also allows you to create cross-platform presentations for the MAC or PC world, as well as totally self contained presentations. It also allows you to install the run time version "Player" on all network systems to enable a system to "play" a presentation even if the system does not have the full blown ASTOUND™ installation.

Hardware

We recently received a Title III Grant to improve our library information system and part of that grant supplied the following hardware:

Hi-tech Room

Our hi-tech room has a Macintosh Power PC, a multimedia Pentium system, a color scanner, a color printer and soon we will be adding a video capture board and a digital camera.

Projection Classroom

We have a three gun ceiling mounted Electrohome Video Projector, a multimedia Pentium 60 computer system, and will soon add a MAC platform.

Computer Classroom

We have 24 work stations all connected to our campus file server. They are also connected to the Tech Commander™, a hard wired control center which allows the instructor to "tune in" any workstation's monitor, to project the instructor's image to any/all work stations and to project any student's screen to any/all other work stations without disrupting their work. It also allows the instructor to blank out all workstation screens in order to direct their attention to the instructor and in general "facilitate their attention span."

Costs

Some of the costs include:

1. The costs of the hardware and software necessary for developing and projecting multimedia presentations, covered mostly by a Title III grant.
2. The extra setup time necessary to learn the presentation software, approximately 20 hours in the early stages of the Fall, 1994 semester.
3. The extra time necessary the first two semesters to create the presentations. I did not complete all the chapters in the Fall semester. I finished MM presentations for Ch 1 - 8, leaving the other 6 chapters for Spring, 1995.
4. The coordination of resources between development centers, projection rooms and instructional laboratories. There were some interesting security issues to deal with as well as logistics issues regarding file storage and accessibility due to network limitations.
5. The added time necessary to help the other faculty and staff who wish to jump on the bandwagon and learn multimedia techniques.

Demonstration

1. I will demonstrate the most beneficial aspects of the techniques I have implemented including:
2. the use of templates to speed up development time
3. the use of ASTOUND™ 's "time line" to control the transitions in a slide
4. the use of hyperlinks to facilitate non-linear slide presentations
5. the use of sound and motion to enhance presentations,
6. the use of scanned images to enhance lectures,
7. the embedding and linking of objects to facilitate real life examples of software applications
8. the use of the outline feature to speed up development time
9. the use of speaker's notes to support a presentation, and
10. the use of posting self contained presentations to the network for student review.

Conclusions

I am convinced that both I and my students have benefited greatly from the utilization of multimedia software in the CL course, and that those benefits do in fact outweigh the investment in time and effort to learn and continue perfecting its application. We are covering more material in a more organized and less overwhelming way than the "good old days" and I am able to revise my materials nearly instantaneously to reflect the quickly changing computing environment we all teach and live in. They seem to respond well and I am better able to guarantee a consistency of coverage between sections, better preparing them for exams and projects. Without an experimental design, there may be some difficulty in measuring the effectiveness of this approach to teaching/learning on the part of our students, but there is no doubt in my mind that I have found the benefits of utilizing the approach outweigh the costs.